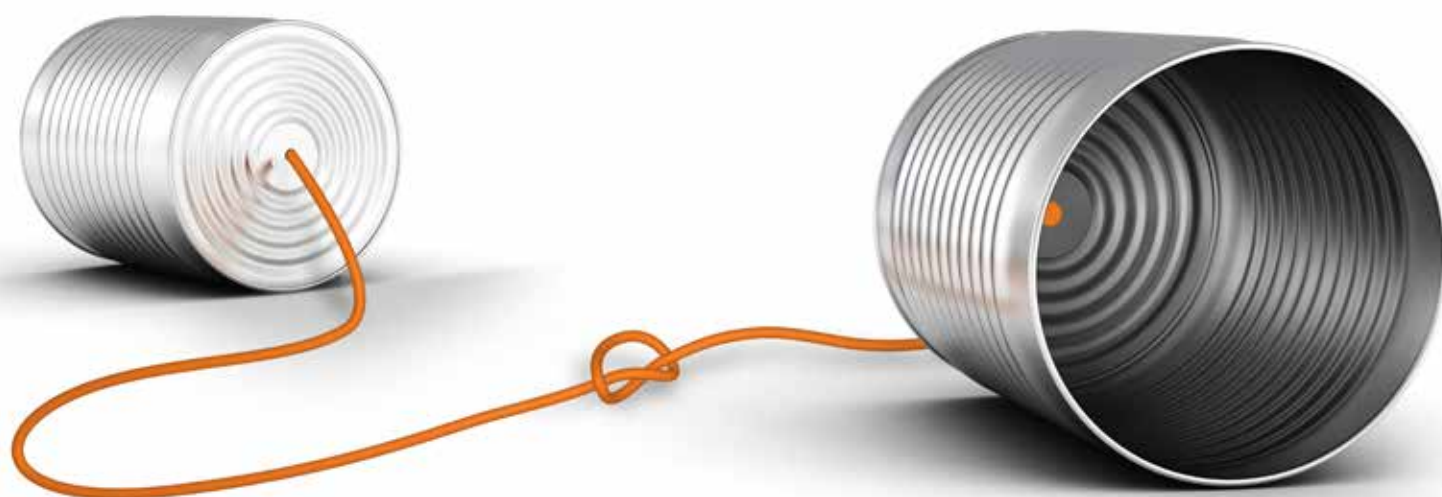


# KontakTUM Magazine

For alumni of the Technical University of Munich  
Autumn/Winter 2016



## Properly connected

An issue on dialogue and  
interdisciplinarity at TUM

# Dialogue starts when different generations **meet.**

For Dr. Daniel Tomic, one of the reasons for the success of his family company is his training at TUM. As one of the donors of the TUM University Foundation, he would now like to express his thanks. Please support your alma mater as well!

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”

*At TUM, I learned what German engineering expertise really means. That's why I promote research projects and young talents.“*

Dr. Daniel Tomic MBA  
TUM Alumni, entrepreneur, and donor  
on the TUM's rooftop with the clock  
tower in the background

## *What holds the world together*

Every day, I deal with people from different scientific disciplines. I meet engineers, mathematicians, and economists at TUM network events as well as in the context of career counseling – and I talk to journalists, photographers, and graphic designers about the layout of the alumni magazine. I cherish the variety, and it really can't get too diverse for me. What's exciting is that all these people have their very own way of speaking and thinking.

To me, interdisciplinarity means willingness to enter a dialogue: we can only be able to gain knowledge and become more communicative if we go along with our counterpart's way of thinking and speaking. With every specialist field I get to know, every work area that “crosses my path”, I learn more about the commonalities between the individual disciplines, about the distinctive patterns of thought. Sometimes, at least, it feels like – in a Faustian sense – getting a glimpse of “whatever holds the world together in its inmost folds”. From page six onwards, you can find out more about the opinions of socially and politically active alumni on the topic of a successful dialogue.

This edition of the alumni magazine initiates a dialogue between different scientific disciplines and generations: In an extensive interview featuring student representative Nora Pohle and TUM President Prof. Dr. Wolfgang A. Herrmann, they discuss their views on the role of the university in society as well as their own commitment in the scope of university politics during the past years (page 14). In the series “Back to the Lecture Hall”, student representative Philipp Rinner meets AStA-veteran Manfred Färber, who – in the mid-sixties – held a blazing speech in front of 10,000 students from Munich on the “Königsplatz”, following a demonstration against a higher education act that was supposed to be adopted by the Landtag (page 30). In the middle of this magazine, you can also read about what TUM now has to do with the training of political scientists (page 26). Wishing you an invigorating and dialogue-stimulating read,



KontakTUM Editor  
**Sabrina Eisele**



**Nowadays, you can still be properly connected using a tin can telephone:**

*In the TUM Community News, you can read about how a tin can telephone was used to raise donations and what the TUM Network has to do with that: [www.community.tum.de](http://www.community.tum.de)*





*Voices of TUM:  
How to bring about a successful dialogue*



*Interview: Student  
representative Nora Pohle  
meets President Herrmann*



*Leaving the ivory tower:  
Dialogue and interdisciplinarity*



*Back to the lecture hall: Commitment in the  
student council, yesterday and today*



*Noticeboard: News from the TUM Network*

**KontaktTUM digital**  
in English and German  
[www.together.tum.de/epub](http://www.together.tum.de/epub)

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Markus Ferber (Electrical and Computer Engineering 1990) has been involved in party politics for the CSU since he was at school – and he has been a member of the European Parliament for more than 20 years. He was able to benefit from the interdisciplinary way of thinking he acquired during his engineering-oriented university education at TUM. “You don’t even have to bother about becoming involved in politics if you’re not able to enter a dialogue” says Markus Ferber. For him, the most exciting kind of dialogue is to exchange views with the public: “We have to give the people an understanding of what we do at European level.” Read more about Markus Ferber from page 22 onwards.



How to bring about ...

...a successful dialogue!

TUM Alumni and students talk about their personal views on the prerequisites of a successful dialogue.



## Voices of TUM



### Peter Pernsteiner

„Dialogue means being open for reasoning that is relevant to the case – regardless of party-political differences, across generations and company hierarchies. You have to be prepared to drop your own opinion if there are more convincing solution approaches. In a successful dialogue, a problem should be addressed step by step. You have to be prepared to take time and to postpone an issue occasionally.“

Peter Pensteiner (Electrical and Computer Engineering 1987) has been chairman of his local FDP-branch since 2003. Since 2007, he does voluntary work in municipal council of Zorneding near Munich – trying to keep the municipality debt-free, among other things. During his studies, he was a member of the faculty council and the TUM Senate.



### Rupert Heindl

„Dialogue should be about a mutual exchange of views. Democracy, for example, can only work out if everyone, especially the younger generation, is taken seriously. This is the case if the individual opinions and concerns are heard. In my opinion, a successful dialogue is first and foremost about listening properly.“

Rupert Heindl (Bachelor Vocational Education in Metal Engineering and Religious Studies 2015) is the regional chairperson of the Catholic youth organization in Bavaria – and as the UN Youth Delegate for Sustainable Development, he addresses the United Nations with the concerns of the younger generation. With his commitment, he aims to motivate others to work towards a sustainable future. Together with one of his colleagues from the youth delegation, he met German Chancellor Angela Merkel at an official reception in New York at the sidelines of a UN General Assembly.



Claudia Tausend (Geography 1992) became chairperson of the SPD in Munich in 2004. From 1996 until she was elected to join the German Bundestag in October 2013, she was a member of Munich's City Council, spokeswoman of the planning committee, and deputy chairperson of the City Hall faction. In addition to party politics, she is involved in the tenants' association, the IG Metall, the workers' welfare organization, and even a men's choir. In summer, the TUM: Junge Akademie – the TUM's support program for the especially talented and dedicated students – invited her to give a lecture on the political situation in Europe.

### Claudia Tausend

“I have now been actively involved in politics for over twenty years; first in Munich's City Council and later, from 2013 onwards, in the German Bundestag. In this field, you can't be successful without the ability to communicate at eye level with various interlocutors, and it is important to respect the other, even if there are opposing opinions. Politics is always about being open to alternative options and about the willingness to find a compromise in difficult situations. This can only work out if I really try to understand the viewpoint of the other.”





## Voices of TUM



### Dr. Thomas Theil

**“A dialogue can also be a controversy.** I repeatedly notice that many people are not aware of the fact that our way of thinking could not work out without language. The necessity to be able to express one’s opinion in a dialogue shapes our thoughts directly. Again and again, I experience that issues can be solved and solutions can be found through dialogue – especially in the engineering sciences.”

Dr. Thomas Theil (doctoral degree in Electrical and Computer Engineering 1990) and his business partner in an inventor’s enterprise hold about 50 patents in the field of distance and angle measurement technology. He is also district spokesman for the local council in Feldafing. In addition to all these activities, his family is very important to him. The photo shows Dr. Thomas Theil with his wife in a hot air balloon during their last vacation in Cappadocia.

### Ingrid Pongratz

**“Part of my work is to treat people respectfully and to keep personal contact.** It is important to acknowledge other people’s concerns and needs. Most conflicts between people arise because we tend to put ourselves first, our own needs. The big trick is to always be aware that other people will think differently. A dialogue is the only way to resolve such conflicts.”

In 2003, Ingrid Pongratz (Mechanical Engineering 1982) became first mayor of the district town Miesbach in Bavaria – and the first woman to hold the position. She was already interested in politics during her time at the grammar school in Miesbach. In 1995, the mayor of Miesbach asked her whether she would like to show political commitment and become a member of the city council. Following thorough considerations and consultations with her family – her sons were aged 14 and 11 at that time – she decided to run for an office.



## Voices of TUM

### Sascha Kienzle



Sascha Kienzle (Political Science 2010) is a consultant at the German Embassy in Singapore and Bangkok. As Head of the Department of Science and Technology, his duties include science policy, welcoming and accompanying scientific delegations, as well as providing information about the research landscape in Singapore and Germany.

**“Kurt Cobain once sang: “Who needs action when you got words?”** This describes what dialogue in the field of foreign policy means to me: It’s about communicative action. In diplomacy, a dialogue serves to solve problems in a conversation and, thus, to avoid harsh measures. It is the essence of trying to settle disputes peacefully and a central element of foreign policy and diplomacy. A dialogue can only be successful if it takes place purposefully and at eye level. All parties must be given the opportunity to participate in the dialogue, as listeners or as speakers. Further, arguments should be based on truth – otherwise, a dialogue will not be able to reach its full potential.”

Dr. Carlos Chiu Fu (Electrical and Computer Engineering 1982) is the international person of contact for the TUM Network in Peru, and he recently opened up a school in his hometown of Huanuco in the Peruvian Andes. The aim is to teach young people a way of thinking that focuses on technology, the engineering sciences, and sustainability.



### Dr. Carlos Chiu Fu

**“From my point of view, dialogue is more than just a conversation between two or more people.** It is about interpersonal interaction, enabling people to learn from each other – about specific topics or about the people participating in the dialogue. When trying to solve a problem, a dialogue can function as a kind of brainstorming. In order to bring about a successful dialogue, all participants should be as open as possible. Listening is just as important as speaking.”

### Gisela Bock

**“If you want to communicate with people and help them, dialogue is essential.** This means that you have to listen to the concerns of the people and take them seriously. It is important to communicate at eye level and to show respect.”

Gisela Bock (Chemistry 1965) was a member of the Bavarian parliament for the FDP. Today, she is involved in an association she founded herself, as a means to keep senior citizens from becoming lonely in old age. In 2011, she was awarded the Bavarian Order of Merit for her longstanding commitment. She got involved in politics through her volunteer work as head of different parent committees (kindergarten, primary and secondary school) during her sons’ years of school.



### Daniel Alfreider

**“For me, dialogue is about having an opinion, about developing it, and about putting it to the test in a societal context, in a circle of friends, as well as in the field of work.** However, there seems to be a dangerous tendency that more and more people interpret dialogue as an opportunity to trumpet their own – often unfounded – opinion, without taking the time question one’s own viewpoint in order to either substantiate or adjust it.”

Daniel Alfreider (Civil Engineering 2005) is a member of the South Tyrolean People’s Party in the Roman Parliament, where he represents the interests of South Tyrol at national level. As a civil engineer, he is involved in the Brenner Base Tunnel project, where he is responsible for cost and risk management. In the TUM Network, he is the person of contact for Italy.





INTERVIEWING AN  
ALUMNI

# “As president, I am responsible for everyone.”

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*Student representative Nora Pohle meets TUM President Wolfgang A.  
Herrmann – a dialogue on commitment in the scope of university politics*





**W**olfgang A. Herrmann, who is a chemical scientist, has now been President of the Technical University of Munich for more than 20 years – but he was already involved in university politics as a spokesman of his student dorm. By vote of her fellow students, Nora Pohle (23) – who is a Master's student of Electrical Engineering and Information Technology – was recently elected as student representative in the TUM Senate for the third time. For KontaktTUM, the two of them met to talk about their commitment to shaping the university during the past years.

Nora Pohle, the budding engineer, tends to think across the scientific disciplines. Alongside her engineering studies, she also studies Philosophy with a minor in Psychology at the Ludwig-Maximilians-Universität. It was her involvement in the student body of the Department of Electrical Engineering and Information Technology – which she joined in her third semester – that laid the basis for her commitment in the Senate. “I quickly noticed that there is a culture of openness here at TUM. You can make a lot of difference, and many opportunities are simply missed because there's no one who is prepared to take care of an issue.” She had so much fun in the course of her commitment that she wanted to continue automatically.

From personal experience, President Herrmann is aware of how “contagious” commitment can be, and he would be glad if more students were to follow Nora Pohle's example. For the alumni magazine, the two of them discussed the importance of the universities in society, the need to think interdisciplinarily, and the challenge of motivating yourself again and again to be able to pursue important tasks.

**Nora Pohle: Professor Herrmann, often, the people are skeptical about technical innovations, such as autonomous cars, for example. Should a university try to do educational work in this respect? Or is this an issue that should be addressed in the scope of politics?**

Wolfgang A. Herrmann: Both, in my opinion – mutually! A university must be “ahead of its time”.

**Nora Pohle:**

**What do you mean by that?**

Wolfgang A. Herrmann: For a university, it is important to try and understand what is not yet known – and, secondly, to evaluate the issue. Scientific research has become increasingly complex and sophisticated, too complicated for a growing number of people. And even I first have to gather information on, for example, the meaning of “Big Data” – whether it's really a distinctive term, what kind of data it is about and what the possibilities are. Thus, how must the people feel if they are constantly confronted with scientific catchwords in the context of spending a lot of money in order to stay competitive? In my opinion, science is nowadays obliged to provide our society with comprehensible information. We must be able to express ourselves adequately.

**Nora Pohle: If you were to hold a lecture series in order to draw the students' attention to their societal responsibility, how would you try to ensure that this would be about more than just memorizing certain ethical theories?**

Wolfgang A. Herrmann: My advantage would be that I don't really know any ethical theories, so there wouldn't be the danger of becoming too theoretical (laughs). For the young people, I find it is most convincing if they notice that a lecturer is not only an

expert in his scientific discipline, but also a human being with interests beyond the facts and figures. I can tell you how I used to address issues like this: When I held lectures in the era of the conflict between the chemical industry and the early “green movement”, I took some of the individual topics that were discussed in the media and – together with the students – tried to develop a fact-based and accurate but, nonetheless, comprehensible approach. Then, we discussed what consequences an event such as the industrial accident in Bhopal, India, could have for our future, and how expertise could help to avoid incidents like this. The students were rather enthusiastic, because the example showed them that our scientific discipline is not isolated from the rest of the world, but to the benefit of the people.

**Nora Pohle: As you just mentioned – learning by practical examples can of course best be achieved by actively joining in. I think it is an important task for the university to show the students how they can take over social responsibility themselves, to get involved alongside their studies and beyond their textbooks. What are the TUM's initiatives to encourage the students to get involved, and where do you see room for improvement?**

That's an appropriate but difficult question. The first thing would be to hope that more students would follow the example of their representatives who – like you, Mrs. Pohle, and several others – show commitment for the whole community. Then, when you realize that tasking over responsibility will make you grow with the challenge, you just carry on. When I was young, it was the same for me. The university is a living environment and a development space. It promotes

“You always have to follow through with whatever satisfies you.”



As a student, President Herrmann showed commitment as his student dorm's speaker. Master's student Nora Pohle was recently elected as a member of the TUM Senate for the third time.

young talents, but it also contributes to the expansion of their educational horizon. That is why, for example, we promote music events, sports offers, student-organized events such as GARNIX and TUNIX, as well as – of course – the work of the student council. At the same time, the university management and the professors must accept the students' aspirations to participate and express criticism. They must be sure that their concerns are taken seriously, that a lot depends on the students. They are part of our success or our failure.

**Nora Pohle: Can you give an example?**

Wolfgang A. Herrmann: Let's take a look at the opinions of the students regarding the appointment proce-

dures we introduced 20 years ago. From my experience, being the one who finally has to deal with the appointments, the completely honest statements have helped a lot. This is due to the fact that the viewpoint of the students is uninhibited and unbiased, because it is based on teaching skills.

**Nora Pohle: On the other hand, commitment also means to explore fields you didn't know much about before. All the legal provisions – especially in the field of higher education policy, as you will know – can be very, very dry. You have to get used to that in order to achieve other goals, so you always have to try and focus on the actual goal to motivate yourself. Do you have**

**any advice? How do you stay motivated yourself, even being as involved as you have been for the last 20 years?**

Wolfgang A. Herrmann: If I have to prepare for a difficult discussion, I always say to myself that I'll surely survive this tough hour as well, like so many before, no matter what the outcome is (laughs). But every hour is precious! Freely adapted from Goethe: A conversation is more precious than light. Actually, the biggest motivation is the realization that all situations you're in – especially surprises – mean a gain of experience for a lifetime. When it was my job to select postdoc candidates for scholarships at the Alexander von Humboldt Stiftung – which, incidentally, was also volunteer work – I could personally be-





*President Wolfgang A. Herrmann and student representative Nora Pohle regularly come across each other at the meetings of the TUM's Senate. Nevertheless, they had a lot to talk about during their meeting in the Café of the Vorhoelzer Forum – and they enjoyed to be able to hold a conversation without a specific agenda, among other things about how to motivate one's peers to get involved in volunteer work.*

benefit from getting to know the entire range of scientific disciplines in quite a short time. All in all, we were 42 evaluators. I represented Inorganic Chemistry, but there were applications from a wide range of disciplines, from Christology to Restoration, and from Conservation Sciences to Astrophysics: an opportunity to gain insight about the current “hot topics” of the scientific community. I can still draw on that experience today. Back then, I really started to get interested in other specialist fields. In my current position, that's a basic necessity: I'm not in this position as a chemical scientist – as President, I'm responsible for everyone.

**Nora Pohle:** Would you say that you are more the type of university president that focuses on social and on university politics, or are you primarily a scientist?

Wolfgang A. Herrmann: It's difficult to keep those things apart. Life has become really interesting for me due to the variety of activities. I am also a father, which is very important to me. Science meant a lot to me for quite a while. I was on fire for scientific research, but I didn't neglect teaching either. When I was responsible for an experimental lecture series for the freshers, I was in the preparation room at six o'clock in the morning – and the lecture started

at eight o'clock. Before the lecture began, I took a seat in the first row and had a look at the blackboard to think through the order of the topics to be addressed. At the end, when you leave the auditorium, it is important that the blackboard shows a comprehensive overview – not only for the sake of completeness, but also to ensure that the students are aware that you're making an effort. You always have to follow through with whatever satisfies you. That's how I developed

“The closer you cooperate, the deeper the relationships.”

various skills I could use on behalf of TUM, for the past 31 years.

**Nora Pohle:** Meanwhile, TUM has quite a lot of interdisciplinary courses to offer – Management and Technology for example or, vice versa, the BA Master's course for the natural scientists and engineers, but also Sociology in Science and Technology as well as the brand new Bachelor's

course of Political Science from a technological point of view, which we are all excited about. In my opinion, this could turn out to be a very successful course of studies. Will there also be a Master's course of Politics for natural scientists, similar to the Master's course of Management & Technology?

Wolfgang A. Herrmann: Sure, there are such plans. If the faculty manages to lay a sound basis in the field of Political Science – which is, of course, really important – and to include the technological aspect, this will be a great benefit for the students. If we succeed in getting the students involved with such topics, for example in the form of group discussions, they will be able to learn more than in the scope of a “standard” course of Political Studies.

**Nora Pohle:** Is that something that distinguishes TUM Alumni from other alumni?

Wolfgang A. Herrmann: It's like always in life:

The closer you cooperate, the more interest you show – in a family or within a university context – the deeper the relationships. I think that's great, a unique characteristic of our university. The other aspects – that the people are good at what they do in terms of science and research – can be expected, right? But the way the people stick together, that's special about our TUM.



# Let's leave the ivory tower

## Focus Dialogue and Interdisciplinarity

Automated driving or working with robots: To ensure that graduates will be able to address the important technological innovations of our time, there are several initiatives to promote contacts between engineers and other disciplines at TUM. Sociology, Cognitive Science and other scientific fields can help our society to assess the opportunities and risks of new technologies, and these fields of study can provide guidance in terms of developing specific fields of activity. Thus, interdisciplinary exchange is an essential characteristic of numerous working groups and institutions at TUM.



**In the debate about the future of the automobile, one trend is especially prominent: It is supposed to operate automatically.**

“There will be significant changes in the field of individual mobility, simply due to demographic factors,” says Prof. Dr. Klaus Bengler of the TUM Chair of Ergonomics, who mainly works on designing and evaluating human-machine interaction. According to Bengler, autonomous driving will constitute a real turning point. “Traveling by car could become much safer and much more comfortable – especially for elderly drivers. When driving in convoy, autonomous cars are quicker and more efficient. This helps to save time and fuel, especially in city traffic.” Thus, there are many benefits. However, as with every new technology, there are also risks – and new challenges for the users and society as a whole. Recently, the news featured reports about the first fatal accident involving an autonomous car. “We, the developers, must therefore carefully consider the effects of technological innovations and, accordingly, ask ourselves how we want to shape them for the benefit of the people,” says Klaus Bengler.

At TUM, the so-called ASHAD project at the Munich Center for Technology in Society (MCTS) addresses issues like this, among other things. The acronym stands for “Automation and Society: Highly Automated Driving”. In the scope of the project, doctoral candidates from seven different departments – from Ergonomics and Business Information Systems to Philosophy – are trying to find out more about the factors of success and about possible problems in the realization of major projects in the area of mobility, in particular regarding autonomous cars. An important issue in the scope of automated driving is the aspect of decision-making: when would users actually be willing to turn on an automated system? Under what conditions would entrepreneurs decide to put automated

systems into their vehicles? In addition, the project focuses on developing methods of risk assessment and early warning systems in order to lay a basis for a dialogue in a social, ethical, and cultural context.

“In this project, researchers from various disciplines – with their different scientific approaches – meet up to think about and discuss technological innovation,” says Klaus Bengler. Sometimes, this leads to a “cognitive dislocation”, when everyone tries to understand each other and to find common solutions. “In the end, it is exactly this interdisciplinary exchange that makes the project so promising,” Bengler says. While the computer scientists collect data about how the Internet will be involved in autonomous driving, for example, the Chair of Ergonomics is already carrying out experiments with small samples of subjects. In a simulator, they can experience what it is like to sit back and let the car drive and navigate all by itself.

#### “TUM is clearly in the lead!”

According to its guidelines, TUM strives to prepare the students to take over responsibility in societal transformation processes. The interdisciplinary Master’s program “Human Factors Engineering” at the Chair of Ergonomics, for example, aims to teach the students how to work out, implement, and evaluate future concepts of human-machine interaction in various application fields. Since 2002, the TUM School of Management aims to teach Economics with a distinct focus on the interfaces of management and technology, the natural sciences and life sciences. The Munich Center for Technology in Society (MCTS) is the TUM’s center for technology research – with a particular interest in modern technology-oriented science, such as the life sciences and engineering sciences, as well as the interdependencies with society. Here, sociologists, historians, and philosophers work on common topics, together with natural scientists and engineers. Their research is

**Genuine interdisciplinarity: doctoral candidates of the ASHAD project** (left to right): Johannes Klepsch (Chair of Mathematical Statistics and Chair of Philosophy and Philosophy of Science), Jan Gogoll (Chair of Business Ethics), Christopher Kohl (Chair of Information Systems), Anna Feldhütter (Chair of Ergonomics), Ulf Steinberg (Chair of Research and Science Management) and Christoph Hohenberger (Chair of Strategy and Organization).





**Politician Markus Ferber**  
(Electrical Engineering and  
Information Technology 1990)  
was often able to put his  
engineering training at TUM to  
good use while working at the  
European Parliament – even in  
the scope of economic policy.



geared towards the TUM's areas of research, such as energy, robotics, and mobility, as well as to fundamental questions about risk, knowledge gaps, or digitization. The research groups of the MCTS are striving to enter a dialogue with the public, with politics, and the economy – based on lectures, themed days, expert workshops, and other events. This is of great importance for TUM: "Society should know what we are working on in science and technology for our future, and how we are preparing young people for tomorrow's challenges", says the mission statement. "At TUM, we are clearly ahead of other universities, because we consistently try to create opportunities for interdisciplinary exchange," Bengler praises. Engineers should get a feeling for attempts to address and answer the really relevant questions before and during the development process. "How, for example, should we decide when it is better – from the aspect of safety – to monitor the traffic while traveling in an automated vehicle, than to use the free time to do something else," says Bengler. In his opinion, it is one of the most important tasks of a modern university to enable the students – whether they are deeply rooted in their scientific field of engineering, social science, or psychology – to be able to make the according

decisions. Apart from the scientific expertise, this is also a matter of exchange between different scientific disciplines.

#### **"Just like the control technology of a complex machine"**

Markus Ferber can confirm this himself: in the eighties, he studied Electrical Engineering and Information Technology at TUM, and he completed his course of studies with a diploma in 1990. He has now been a member of the European Parliament for over 20 years, and he was able to benefit from his engineering training a lot. Especially in his current main field of activity – economic policy – his technical focus often helps him to find solutions.

"In the scope of my work, I have to ask myself how it is possible to regulate the stock markets, for example. That's something I didn't really learn a lot about during my training," says Markus Ferber. Ultimately, however, stock markets can also be seen as a system with an input and an output: "Just like the control technology of a complex machine: If I want a system to become stable, I have to take care of the outside influences and regulate the output in such a way that everyone

can live with it." For him, it was fascinating, to apply his knowledge of control engineering to different subject fields: "My colleagues were but a bit frustrated because they didn't understand what I was talking about," Ferber laughs. All the better that TUM recently expanded its portfolio when taking over the sponsorship of the Bavarian School of Public Policy (p. 26). As of this winter semester, students of Political Science will be able to learn more about different aspects of the technical and the natural sciences, the life sciences, and Medicine that are of high political and social relevance. With the Institute for Advanced Study (TUM-IAS, founded in 2005), TUM strives to follow through with the idea of an interdisciplinary collaboration that does not only involve politics and science, but also the companies. As so-called "fellows", leading scientists from universities and research institutions as well as high-profile experts from the industry can spend an extended research stay at TUM-IAS. Together with the TUM scientists, they pursue interdisciplinary projects in new and especially future-oriented areas of research.



## Autonomous vehicles on Campus Garching

If it were up to the "German Innovation Lab" (GIL), TUM Campus Garching could become one of the first public test fields for autonomous driving cars in Germany during the next few years. Autonomous cars – also from German manufacturers – have been driving around on closed off areas for quite a while already. On public roads in Germany, however, there must always be a driver who can take over in an emergency, for insurance reasons. Currently, the German Innovation Lab is looking for a suitable public test field where it would be possible to test cars without a driver. For several reasons, the think tank is of the opinion that the Research Campus Garching would be ideal. "Autonomous or automated driving is one of the most important challenges of traffic engineering, in addition to the propulsion systems. This is also a scientific subject, because autonomous driving can only be accomplished with the help of sophisticated and reliable sensor and information systems," says TUM President Wolfgang A. Herrmann. "We are in the midsts of a global competition for the best solutions, so it is high time to really focus on the issue. Our Research Campus Garching is able to meet all the requirements."



Autonomous vehicles aren't new to Campus Garching. In the scope of the DFG special research area "Kognitive Automobile", there had already been tests with an autonomous Audi Q7.



# How TUM promotes *dialogue* and *interdisciplinarity*

*The Technical University of Munich bears responsibility for a social dialogue. The aim is to prepare the students for the responsibility of accompanying processes of social change. With a diverse portfolio – involving the TUM School of Education, the TUM School of Management, and the Munich Center for Technology in Society – TUM offers a unique structure for holistic assessment and control processes.*

From October 2016 onwards, the Bavarian School of Public Policy (HfP) and TUM will be training future political scientist – according to the motto “A Fresh Take on Political Science” – thereby extending the portfolio once again. In July 2014, the Bavarian Parliament decided that the HfP should be associated to TUM as the supporting university. Its excellent scientific environment will open up new perspectives at the interface between the social sciences and the fields of engineering or the natural sciences. “The rapid development of technology has led to a situation in which technological issues come to play an important, even crucial role in almost all policy areas,” says TUM President Professor Wolfgang A. Herr-

mann. “The interdisciplinary nature of the program aims to enable the graduates to analyze the interdependencies between society, politics, and technology, and to shape the political framework of these fields accordingly.” The Bavarian School of Public Policy is already located near its new supporting university since mid-2016, in the “Brienner Forum” at Königsplatz. The future students of the HfP will also be enrolled at TUM, giving them access to all the facilities and services, just like the other TUM students. Further, the existing and the future alumni of the HfP can take full advantage of the TUM Network. They can attend networking events and make use of career offers as well as the online network ([www.together.tum.de](http://www.together.tum.de)). Because



By taking over responsibility for the Bavarian School of Public Policy, TUM is able to expand its portfolio. Future students can benefit from the TUM's facilities and services without limitations.

the effects of technological progress – for example in the fields of energy, environment, climate change, big data, data security, and mobility – will be of increasing importance in society, the new Bachche-

of the highest political and societal relevance from the TUM portfolio, in the way of the technical and natural sciences, the life sciences, and Medicine. The students can choose modules from these fields and, thus, start to sharpen their personal profile during their basic studies already. This also applies to the work experience phase, during which – over the course of several months – they will get to know a political actor in Germany or abroad.

## A PRODUCTIVE ALLIANCE

*The Bavarian School of Public Policy is now a university hosted by TUM*

lor's students of the HfP will be able to get to know technological innovations during their studies already. The new course of studies covers the classical topics of political science, and the students will acquire basic knowledge in related fields such as economics and law. An interesting and unusual feature of the new study course of Political Science is that it involves topics

“We managed to reorganize the Bavarian School of Public Policy in record time, and the Landtag provided generous resources,” says TUM President Herrmann. “Against the background of policy shifts in times of profound technological and social changes, the HfP and its internationally experienced researchers will continue to set standards in the fields of research, teaching, and policy advice.” Markus Blume, Chairman of the Reform Committee, is confident as well: “The result will be an institution of political science that is unique in Germany – with its very own high-profile features and a fantastic symbiosis with the TUM University of Excellence.”



# 3 QUESTIONS



for Prof. Dr. Eugénia da Conceição-Heldt

**Why is the Bavarian School of Public Policy undergoing a content-oriented realignment in the course of being associated to TUM?** It is our aim to rethink political science by covering the dimension of technology as well. At the new HfP, we will therefore not only teach the classical canon of political science, but we will also try to take technological innovations and the challenges of governance in the digital age into account. The question is: What is currently changing for the actors and the institutions? A good example: Nowadays, political actors must respond to events much more quickly, since communication is not limited to the traditional media any more, but also takes place via social media platforms such as Facebook or Twitter. This can be seen as a digital revolution, because the relations between the institutions and the structures are becoming more transparent. This leads to faster changes. A transdisciplinary approach is the only possibility to face these challenges in the future.

**To what extent can the engineering sciences benefit from political science – and vice versa?** Synergy effects might arise for both disciplines, especially with respect to the development of new technologies. Usually, technical innovations are dependent on public acceptance. If there is no pu-

Professor Eugénia da Conceição-Heldt is Reform Rector of the Bavarian School of Public Policy and Professor at the Department of European and Global Governance. Previously, she held the Chair of International Relations at the Technical University of Dresden, where she was also Executive Director of the Institute of Political Science. Before that, she conducted research at Harvard University and the Freie Universität Berlin, among others. She was granted a Heisenberg scholarship from the DFG in 2010, and a research award of the European Research Council (ERC), worth 1.3 million Euros, in 2012.

blic acceptance, there will be problems – at the latest when it comes to introducing a new technology. Thus, it is important that engineers learn the basics of political science. We can teach them about the principles of decision-making processes in a federal state such as Germany – or beyond. Nowadays, many of these processes take place at EU level or globally.

**Where can the HfP graduates go after completing their training?** I think there are three major areas in which our graduates can be employed: Firstly, as civil servants in the field of politics. Since its establishment, the HfP has distinguished itself as a cadre factory for the political landscape of Bavaria. We want to go further and prepare our graduates for the federal level, or even for the European or global level. Secondly, our graduates are well prepared to venture into the economic sector. They can, for example, focus on areas such as public relations, where political acceptance of corporate decisions play a major role. The third component of the program is of course our aim to train researchers and scientists. Therefore, we will introduce a Master's degree and a long-term graduate school in about a year. Our approach of covering politics as well as technology is really something new in Germany.

## Seven new professorships at the Bavarian School of Public Policy

In order to reach the most important goal of the reform effort – namely focusing on the interdependencies between technological progress, social change, and political action – seven new professorships were established at the HfP. An appointment committee, consisting of renowned political scientists, technical scientists and social scientists – selected the candidates. The seven new faculty members will shape out the new Bachelor's course of Political Science, which starts in the winter semester 2016/17. In addition, some of the lectures will be given by other TUM professors. At the same time, TUM will benefit from a more diverse curriculum in the field of Political Science, as the new professors will be holding lectures there as well.



Prof. Dr. Jürgen Pfeffer, Prof. Dr. Lisa Herzog, Dr. Hannemor Keidel (Commissioner of the President of the Bavarian School of Public Policy), Prof. Dr. Eugénia da Conceição-Heldt (Rector of the Bavarian School of Public Policy), Dr. Claudia Höfer-Weichselbaumer (Managing Director of the Bavarian School of Public Policy), Prof. Dr. Stefan Wurster, Prof. Dr. Tim Büthe, and Prof. Dr. Simon Hegelich (from left to right)



# yes!

HAVE A SAY & JOIN IN!

*Should students also be involved in university politics alongside their course of studies? According to three TUM Alumni who should know, the answer is “Yes”. Manfred Färber (Mechanical Engineering 1969) was Chairperson of the AStA in 1966; Ulrike Irmscher (Mathematics 1968) was one of the first female semester spokespersons, and Philipp Rinner (Sports Sciences 2015) is currently a student representative in the TUM’s Senate.*



**TUM Alumni Manfred Färber and Ulrike Irmscher visited their alma mater,** where they met student representative Philipp Rinner.



"Those were the days": Manfred Färber took along his old photo album, which immediately brought back memories of his student days.



***“Back then, there was a widespread atmosphere of departure. The students banded together and campaigned for a better education policy,”***  
*Ulrike Irmischer explains.*

“Back then” – meaning the mid-60s – Manfred Färber and Ulrike Irmischer were students at TUM. One of the first demonstrations took place in June 1965, when Klaus Irmischer (Electrical Engineering and Information Technology 1967), Ulrike Irmischer's late husband, was Chairman of the General Student Committee (ASTA). The students took to the streets, demanding a restructuring: “One of the demands was that more young people should be able to study, not just a small elite,” Ulrike Irmischer recalls. When Manfred Färber took over presidency of the student council, the students had started to push through with changes to the university laws. In a passionate speech in the course of the demonstration on July 6, 1966 – on behalf of about 10,000 students – he demanded more freedom within the university administration: “For example, it was the responsibility of the Ministry of Education and Cultural Affairs to appoint the professors – and we wanted more say,” Färber recalls. “The initiative was successful, and the benefits can still be experienced today,” says Philipp Rinner. “There is at least one student representative with voting rights in every appointment committee at TUM.” Philipp Rinner, who is currently in his Master's course of Economics, has been showing commitment for the students in several positions during the last three years. In October 2015, he was elected to join the TUM's Senate and the University Council. With his interest in the ASTA, he can be seen as an exception among his fellow students. A possible explanation is that most of the students are not interested in political commitment at the university due to the prevailing pressure to perform and because of being pressed for time. “Students tend to concentrate on the actual course of studies. Some of them have to work part-time as well.” But the students still take to the streets if they are concerned about an issue that affects them directly. “Until 2013, there were concerns about the topics of tuition fees and the introduction of the semester ticket by Munich's public transport company. There were demonstrations, and the students were also involved politically,” says Philipp Rinner. In his opinion, it is important to emphasize the benefits of university commitment. For ex-



ample, the importance of the “soft skills”, the social and personal skills, for the field of business and the industry could not be stressed enough. “Studies in Business Administration can tend to bring about lots of lone wolves. There must be more awareness for the fact that commitment in the field of university politics can help to acquire negotiating and teamwork skills, as well as a leadership personality,” says Philipp Rinner. In his work-life, Manfred Färber was able to benefit from his time as a student representative as well. “Thanks to my disputes with presidents and ministers, I learned to emphasize my point of view and not to be afraid of the top brass.” Commitment in university politics has the advantage of direct exchange with the decision-makers: “Where else can a student experience that nowadays?”

A lot has changed during the last 50 years – the topics of university politics as well as the willingness to become involved. But there seems to be a revival of some aspects: “We wanted to focus on university politics alone, not on political issues on state level. We made this clear at a meeting of the German student bodies in Heidelberg. The students from Berlin and Hamburg thought quite differently about that,” Färber recalls. “That's really interesting”, says Philipp Rinner. “It's still like that. We quit the ‘Deutschlandverband’ two years ago, because we thought there was too much discussion about federal politics.” Another thing that TUM students tend to be very interested in is the aspect of international exchange. While the students of the sixties organized the first Czech-German student exchanges, the students of today show commitment to ensure that refugees are able to take up a course of studies. Currently, there are about 200 young refugees enrolled as guest students at TUM.

A student demonstration on the “Königsplatz” in 1966: Later on, Manfred Färber held a passionate speech in front of 10,000 listeners to protest against a planned university law reform which would have limited academic autonomy.



# 1 x Family 3 TUM

**“Do you remember...?” They all have different memories connected to their alma mater, as they were students or lecturers here at different times – but the three of them are closely connected to TUM. Professor Gerald Thurner, his daughter Professor Veronika Thurner, and her husband Michael Arbesmeier are a family of TUM Alumni.**

Gerald Thurner did not only study at TUM, he was also a professor here. After almost 40 years, he almost felt at home on the premises where he enrolled for Civil Engineering in 1951. Back then, TUM was still called “Technische Hochschule”. “At the end, we were 140 graduates – and only one girl,” the 86-year-old recalls. His daughter Veronika, who studied at TUM almost 40 years later, vividly remembers the beginning of her course of studies in the winter semester 1989/90, when about 500 students put their name down for a beginner’s course in Computer Science. During the holidays, after her fourth semester, she first met her fellow student and husband-to-be, Michael Arbesmeier. “We met in the southern section close to the corner of Gabelsberger Straße and Arcisstraße, where the Chair of Applied Engineering in Information Technology and Numeric Programming had 15 computers in the attic. It was always very hot

there in summer,” Michael Arbesmeier recalls. During the visit to their alma mater, they recall memories of the lecture halls, the former professors and the time they spent together during their course of studies. “The main auditorium in the old building was very important for us, because there were regular film evenings,” says Michael Arbesmeier. “We didn’t have that when I was a student,” Gerald Thurner laments. His career path took him back to TUM via a detour. He started his first job at a company in Essen in 1956, right after graduating. “I was supposed to act as a representative of the company, to visit the different railway administrations in Germany. I would not have been working as an engineer, but as a merchant. I didn’t like the idea,” says Gerald Thurner. Nine months later, he quit the job. Shortly after, he heard that the Chair of Tunneling and Construction Management in Munich was looking for a young engineer as an assistant. “I was really happy about the opportunity! And here I am today,” laughs Gerald Thurner.

1969 was an important year for Gerald Thurner: He completed his doctoral studies, and his daughter Veronika was born in December. “Three years later, it was time for the habilitation – and I became a professor of Construction Management.” Veronika Thurner was quite



Prof. Dr. Gerald Thurner studied civil engineering at TUM and later worked here as a professor. His daughter Prof. Dr. Veronika Thurner followed in the footsteps of her father and became also a professor. This was after she studied computer science at TUM, where she met her later husband Michael Arbesmeier.

young when she got acquainted with university life. As a child, she visited her father at TUM, and she can still recall memories of his office: “I remember there was a rubber tree standing in my father’s office,” the 46-year-old laughs. However, the fact that her father was a professor did not have much influence on her decision to take up a course of studies, nor on her career choice. Ever since her school days and a year abroad in the United States, she had been interested in computer science. For Veronika Thurner, it was not a problem that her father was a professor at the university where she wanted to study herself. “I enrolled for a different area of studies – and the university is huge, so the name Thurner didn’t really come to attention.” In 1995, after completing her studies in Computer Science with a minor in Mathematics, she married Michael Arbesmeier in the premises of the Catholic Student Group. She graduated in 2004, following the birth of their two children. She didn’t follow her father’s choice of field of study, but she was inspired by his choice of career path. “Similar to my father’s career, I was able to rely on chances as well,” Veronika Thurner says. Today, she is Professor of Software Engineering at the Department of Computer Science and Mathematics at the Munich University of Applied Sciences. Her commitment for passing

on technical knowledge in combination with didactic and pedagogical aspects is exceptional. Thus, the Bavarian State Ministry of Education and Culture, Science and Art presented her with an award for her commitment to didactics. This year, the professor received the “Award for Outstanding Teaching” for the second time. “She’s much more skillful than I am – especially in the field of didactics. I didn’t pay so much attention to that back then,” Gerald Thurner admits. “It is a basic characteristic of her work to discover and to promote potentials,” her husband Michael Arbesmeier agrees. In 1993, when his wife was still a student, he founded his own company – ARS Computer und Consulting – together with his fellow students Kai-Uwe Rommel (Computer Science 1992) and Roland Schock (Computer Science 1992).

What about becoming a professor, like his wife and her father? Michael Arbesmeier decided otherwise: “I think I might have been good at teaching. However, it would have been a nightmare for me to work on a doctoral thesis and the habilitation.” Nonetheless, he is still connected to TUM. “We are always looking for talented young computer scientists to join our company – and talents from TUM are more than welcome!”





## CALL

According to the motto “We belong together”, KontakTUM presents people who have more in common than being former TUM students and who kept contact for many years – be it family members, couples, colleagues, neighbors, or others. What about you?

We are looking forward to your message:  
[alumniundcareer@tum.de](mailto:alumniundcareer@tum.de)

The blue cube Gerald Thurner is holding is the characteristic feature of the KontakTUM series “We belong together”. It symbolizes the portrayed alumni’s connection to TUM.



# Noticeboard

*Flying high: Cheering with the team of ParkHere (outer left and outer right): LfA-Chairman Hans-Peter Göttler, Harald Wagner (Head of the Munich Business Plan Competition) Dr. Carsten Rudolph (Managing Director of BayStartUP) and Dr. Otto Wiesheu (Minister of State, retired).*



## The Noticeboard of KontakTUM features messages from the TUM Network

*A reason to celebrate:*

*the start-up company ParkHere, founded by three TUM Alumni, reached first place in the Munich Business Plan Competition as the best high-tech start-up. The TUM-based spin-off managed to market the first energy self-sufficient parking space system. Felix Harteneck, Jakob Sturm and Clemens Techmer hope that their innovation will not only help to make finding a parking space easier for motorists, but also more environmentally friendly. More information: [www.community.tum.de](http://www.community.tum.de)*

## NEW BOOKS BY ALUMNI

Protagonist Eric Brinneau is supposed to arrange a secret meeting with the Chancellor and to develop solutions to stop climate change.



### Der Krimi um die Elektromobilität

“Elektrisiert” is a business thriller, written by TUM Alumni Michael Valentine-Urbschat (Aerospace Engineering 1987). Following his studies, he worked in the field of engine development at BWM for about ten years. Then, among other assignments, he became a CEO for Siemens and was primarily concerned with electric drives for cars. Today, he is an advisor for car manufacturers and governments, mainly regarding the energy turnaround – an issue that plays an important role in his novel.

Cohabitation of mankind and machines? In his book, Dr. Ulrich Eberl describes how this could work out.



### Living with smart machines

For his recently published book “Smarte Maschinen – wie Künstliche Intelligenz unser Leben verändert”, TUM Alumni Dr. Ulrich Eberl (doctoral degree in Physics 1992) did research on the latest developments in the fields of automation, robotics, and artificial intelligence – in Japan, the United States, and in Europe. “The trends of machine learning, data analysis and dissemination, robotics, and the fourth industrial revolution will coalesce, starting a revolution that will radically change all aspects of our life,” explains Dr. Eberl.

## TUM President Herrmann in Singapore

As a guest of honor, President Wolfgang A. Herrmann had the opportunity to talk to graduates at the TUM Alumni meeting in Singapore. The invitation had come from TUM Asia, the first campus of a German university abroad. “I am really enjoying the ‘Stammtisch’ – and it is a pleasure to see that we have so many alumni in Singapore. Also, I am glad that so many outstanding doctoral students from Munich are now conducting research here in Singapore,” said President Herrmann.

If you would like to find out more about what the alumni have to say about the “Stammtisch”, please visit the TUM Community Blog: [www.community.tum.de](http://www.community.tum.de)



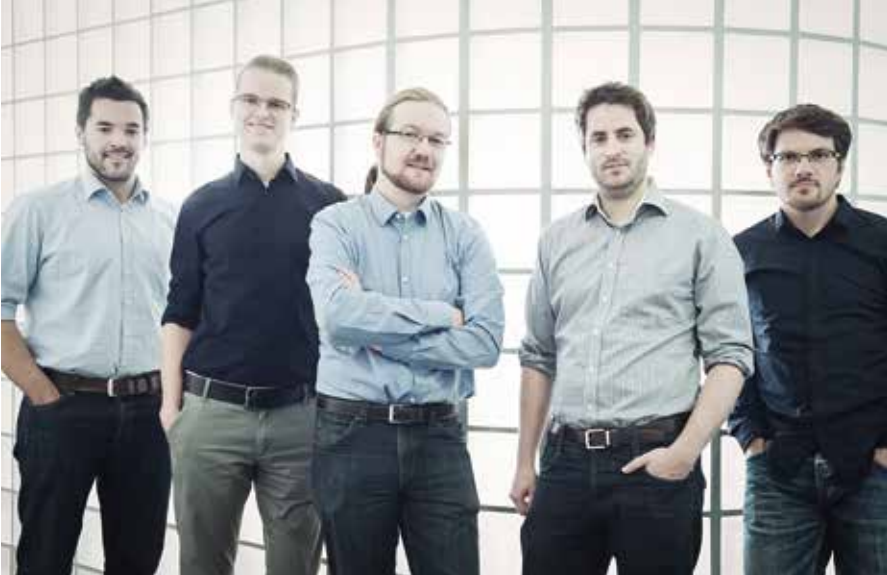


A VIRTUAL OVERVIEW OF THE AIRPORT



The founding team of NavVis and their mapping trolley in the TUM's staircase: Robert Huitl, Sebastian Hilsenbeck, Dr. Georg Schroth, and Dr. Felix Reinshagen (from left to right).

**First the “Deutsches Museum”, now Munich Airport:** The start-up NavVis – founded by the TUM alumni Sebastian Hilsenbeck (Electrical and Computer Engineering 2011), Robert Huitl (Information Technology 2010), and Dr. Georg Schroth (Electrical and Computer Engineering 2008) together with their colleague Dr. Felix Reinshagen – has developed a technology to digitalize and visualize interior spaces. A digital map of Munich Airport – including 360-degree views – was completed in May. Now, anyone who is interested can explore the terminals as well as the shops, bars, and lounges from home. NavVis started off at the Chair of Media Technology at TUM. In early 2013, the team won the ideas competition TUM IdeAward, and the company was founded in May 2013.



The team of SimScale (from left to right): David Heiny, Vincenz Dölle, Johannes Probst, Alexander Fischer and Anatol Dammer.

Simulations for everyone

**SimScale aims to help engineers to develop and test their products better, faster, and at lower costs.** The startup was founded by the TUM Alumni David Heiny (Mechanical Engineering 2013, Mathematics 2014), Vincenz Dölle (Master of Computer Science 2013), Anatol Dammer (Master of Computer Science 2013), Alexander Fischer (Mechanical Engineering 2013) and Johannes Probst (Mechanical Engineering 2013) while they were still students.

The five visionaries created a platform for engineering simulations, on which it is possible to perform complex 3D simulations. “We wanted to provide easy and convenient access to simulations,” says Vincenz Dölle. Thus, engineers who develop products have the opportunity to check whether their constructions will work out. Moreover, SimScale connects engineers from all over the world: platform users can share their simulation results and offer to help others.

Predicting pedestrian flow

**TUM Alumni Dr. Angelika Kneidl (doctoral degree Computer Science 2013) and Florian Sesser (Computer Science 2011) are interested in analyzing and simulating how crowds behave at events, how people move about in public places or buildings.** In 2014, they founded the company accu:rate. The idea was born while Dr. Angelika Kneidl was writing her doctoral thesis on the topic of pedestrian flow simulations – in 2010, when the Love Parade Incident occurred in Duisburg: “I thought it would be a pity if the results of my doctoral thesis, which might have helped to avoid the disaster, would end up in a drawer. So I pondered on how it could be used in the course of founding a company,” Dr. Kneidl explains. With support from the EXIST-program and UnternehmerTUM, accu:rate was founded as a TUM spin-off.



Based on simulations of pedestrian flow and crowds of people, Angelika Kneidl and Florian Sesser aim to make events safer.



Alumni startups

THE GLOVE OF THE FUTURE

**ProGlove is a start-up in the field of wearables and the fourth industrial revolution.**

At the end of 2014, Thomas Kirchner (TUM-BWL 2011), Jonas Girardet (Master of TUM-BWL 2013), Alexander Grots, and Paul Günther (Master Business Administration 2014) founded the company. They produced a smart glove that will lead to greater efficiency and support ergonomics in the scope of industrial production. The electronic glove is equipped with various sensors that are able to measure the wearer’s movements in order to detect, for example, whether a worker is using the correct component for the respective task. The aim is to improve industrial processes, to enhance the productivity of work processes, or to detect errors at an early stage, for example.

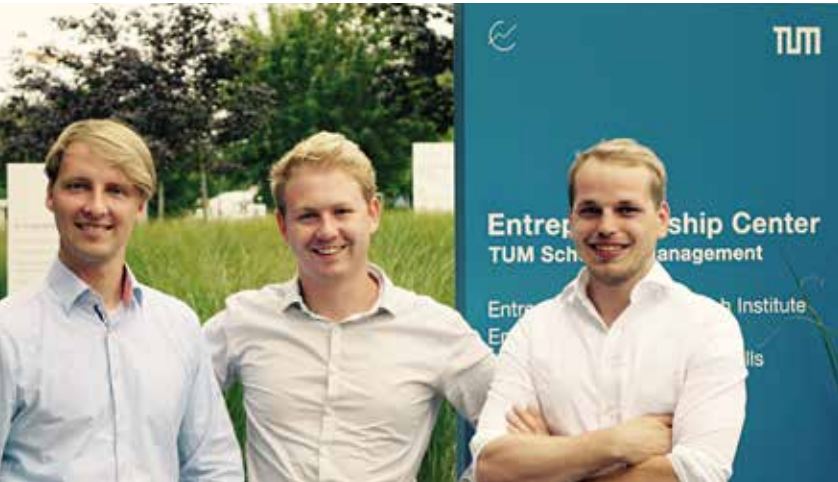


The four founders are pleased that the smart glove is currently being used by, among others, the car manufacturer BMW and automation specialist Festo: Paul Günther, Alexander Grots, Jonas Girardet and Thomas Kirchner (from left to right).





COMPANY FOUNDERS  
SKETCH THEIR IDEA!



The three optimists behind “iuvas”: Moritz Knoblauch, David Fehrenbach, and Sinan Denemec (from left to right).

The three young entrepreneurs Sinan Denemec, David Fehrenbach (Master of Mechanical Engineering 2015) and Moritz Knoblauch (Master of Mechanical Engineering 2015) developed a drinking aid that could optimize the clinical routine. Its name is “iuvas” (Latin for “you help”). Soon, people might not have to use feeding cups or drink through a straw any more. What’s new about this cup is the elastic membrane. It contracts while drinking, keeping the fill level at the top of the cup. As this results in the impression of always drinking from a full glass, people who have trouble swallowing will not have to put their heads back to drink any more. This minimizes the risk of fluid entering the trachea.

ALUMNI  
ARTEFACT

An encounter in Silicon Valley

The start-up KONUX, founded by three TUMA, is currently working on a digital representation of the high-speed network of the Deutsche Bahn, which will help to predict the need for repairs. They met Dr. Rüdiger Grube, Chairman of the Deutsche Bahn, in Silicon Valley. The start-up KONUX, founded by three TUMA, is currently working on a digital representation of the high-speed network of the Deutsche Bahn, which will help to predict the need for repairs. They met Dr. Rüdiger Grube, Chairman of the Deutsche Bahn, in Silicon Valley. In mid-2015, KONUX was one of the four winning start-up teams in the scope of the DB Accelerator Program. Since then, the company has been working on a digital representation of the high-speed network of the Deutsche Bahn. The aim is to collect and analyze sensor data on the condition of critical points of the infrastructure – switches, for example – with the aid of artificial intelligence, and



KONUX CEO Andreas Kunze (right) and KONUX CTO Vlad Lata (left) met Dr. Rüdiger Grube, Chairman of the Deutsche Bahn, at a barbecue in Silicon Valley.

to visualize the results on a user-friendly online platform. According to Gideon Laux of KONUX, the advantage for the Deutsche Bahn is that it will be possible to predict when a part of the infrastructure will have to be replaced, which will help to optimize the maintenance work. The passengers and freight customers will benefit from less cancellations and from improved punctuality. In the course of a business trip to Silicon Valley, the senior management of Deutsche Bahn hosted a BBQ for friends and partners. KONUX CEO Andreas Kunze (Business Information Systems 2014) and KONUX CTO Vlad Lata (Electrical and Computer Engineering 2013) took part as well. The day before, the KONUX team had a board meeting in Palo Alto, as KONUX has a branch in Silicon Valley in addition to its headquarters in Munich.

ALUMNI AT OLYMPIA

The 2016 Olympics: the TUM Network was there too!

In summer 2016, the 31st Summer Olympic Games took place in Rio de Janeiro, Brazil – and a few members of the TUM network even took part themselves: Seven TUM students joined in the race for the medals. As an honorary member, Dr. Gertrude Krombholz (Sport Science 1981) – who belongs to the so-called Paralympic Family since 2002 – presented medals to the athletes. All reports regarding the Olympic Games can be found at [www.community.tum.de/category/olympia](http://www.community.tum.de/category/olympia)



Dr. Gertrude Krombholz at the award ceremony of the Paralympic Games in London 2012.



## Alumni-Ticker

The Berlin Senate has appointed **Dr. Andrea K. Bör** (doctoral degree **Electrical Engineering 2005**) as the new Chancellor of the Freie Universität Berlin. Before,

she held the position of Chancellor at the University of Passau. ■ As of October 2016, **Professor Wolfgang Fischer (Architecture 1989)** will be Vice-President of the University of Applied Sciences Würzburg-Schweinfurt (FHWS). From 1992 to 2001, Wolfgang Fischer served as a lecturer at the Hochschule München before he was offered a professorship at the FHWS (Building Construction). ■ **Christian Grodau (Electrical Engineering and Information Technology 2001)** was appointed as the new CIO of the Messe München in February 2016. Before, he worked for the regional telecommunications provider M-net, as Head of IT. ■ The Biberach University has appointed **Prof. Dr. Gerhard Haimerl (doctoral degree Civil Engineering 2004)** as a Professor at the Faculty of Civil Engineering and Project Management. From the summer semester 2016 onwards, he will be responsible for the specialist field of Hydraulic Engineering – regarding the Bachelor's and the Master's course. ■ On April 1, 2016, **Prof. Dr. Ute Hoffmann (doctoral degree Medicine)** took the position of the new Deputy Chief Physician of the Department of General Internal Medicine and Geriatrics at the "Krankenhaus Barmherzige Brüder" in Regensburg. She is also the first female head physician at the hospital. ■ On April 1, 2016, **Martin von Hummel (Mechanical Engineering, Industrial and Economic Science 1998)** took the position of the new COO at the healthcare company MEDIAN. The 46-year-old held several managerial positions in the field of healthcare since 2005. ■ **Dr. Bernhard Kirchmair (Computer Science 2005)** has been appointed Chief Digital Officer of the IT company Fritz & Macziol. Over the last few years, Kirchmair held various management positions at Telefónica Germany / O2. ■ **Dr. Stefan Kreis (doctoral degree Brewing and Beverage Technology 2000)** has taken over responsibility as Head of Quality Management, Research and Development at Erdinger Weißbräu. Before, Kreis was Vice President Development for the Carlsberg Group, working in Denmark and France. ■ **Dr. Jörg Lehmann (doctoral degree Brewing and Beverage Technology 1997)** is the new Managing Director of Bad Brambacher Mineralquellen. The 47-year-old took the office of CEO at the Kulmbacher Brauerei on May 1, 2013, where he is responsible for the engineering department. ■ **Prof. Dr. Jochen Litterst (doctoral degree Physics 1974)** was awarded an honorary doc-

torate at the University of San Marcos in Lima, Peru. He was President of the Technical University of Braunschweig from 1999 to 2004. ■ In April 2016, **Bernd**

**Lorösch (Mechanical Engineering 1999)** was appointed Director Global Sales and Services at the electronics manufacturer Smart Ray. His job is, among other things, to support the company's growth in the field of 3D laser measurement sensors. ■ In early January, **Jens Nielsen (Aerospace Engineering 1990)** was appointed new Chief Operating Officer and Vice President Operations Germany of the German technology company Thales. Before, he was employed at Airbus Defence and Space, most recently serving as Senior Vice President Unmanned Aerial Systems. ■ The TÜV SÜD Auto Service GmbH has appointed **Philip Puls (Mechanical Engineering 2003)** as the new Head of Technical Inspection in the field of motor traffic in Bavaria. Since 2011, the father of three was Deputy Manager and Head of Technical Services – responsible for the globalization of the business unit on a national and international level. ■ The technology company Continental has appointed Stephan **Rebhan (Mechanical Engineering 1993)** as the new Head of Transmission, where he is responsible for the development and production of transmission controls. Before joining Continental in July 2015, he was Head of the competence center "Engine Air and Transmission" at Knorr-Bremse. ■ **Dr. Bernd Schönwälder (Electrical engineering and Information Technology 1997)** is a new member of the Management Board Market and Sales of Mercateo AG. The engineer and graduate psychologist started his career at Mercateo in 2010. ■ In April, **Dr. Kathleen Stürmer (doctoral degree TUM School of Education 2011)** was appointed to the Chair of Teaching Effectiveness / Learning Trajectories at the Hector Institute for Empirical Research in Education Tübingen. From 2011 to 2014, she served as Managing Director of the Graduate Center of the TUM School of Education. ■ For his research on magnetic bacteria, **Prof. Dr. Dirk Schüler (doctoral degree Biochemistry 1994)** was awarded the ERC Advanced Grant, the most important European research award, which is endowed with 2.3 million Euros. Dirk Schüler holds the Chair of Microbiology at the University of Bayreuth. ■ Changes at the top level of Porsche's development department: **Dr. Michael Steiner (doctoral degree Mechanical Engineering 1995)** was appointed Head of the Department of Research and Development. He has been in leading positions at the Porsche Development Center in Weissach for 14 years already. ■

## Alumni-Ticker





Greetings  
from

## Brasil

*“In the seventies, I came from Costa Rica to TUM thanks to a DAAD scholarship. In 1980, I obtained my diploma in Mechanical Engineering and started working in the development department of a German company which also held shares in a Brazilian company. Thus, my wife and I moved to Brazil two years later, where we started to feel at home. Brazil is huge – about the size of a continent – with a vast mix of different cultures. For me, the highlights of the country – apart from its lush nature – are the friendliness of the people and the multicultural diversity. We decided to stay in Brazil. Ten years later, I established my own business there. Due to demand for new technological solutions, our staff came into contact with very different types of industry in different agricultural regions. My student days at TUMs and the according experiences are very important to me in this regard as well. Just like the opportunity to work in an excellent German company, this helped me to be prepared for the challenge of developing equipment for new applications in different technological fields – or, in other words, to think and work interdisciplinarily. Due to the size of the local market, with over 200 million potential customers and another 175 million in the neighboring countries, Brazil offers great opportunities, especially with regard to technological innovations. Therefore, I can only encourage other entrepreneurs and TUM Alumni to explore Brazil’s potential and to establish contacts via the large TUM Network in Brazil.*

*If you want to stay up-to-date with what is going on in Brazil, visit [www.community.tum.de/gruppen/rede-brasil-da-tum/](http://www.community.tum.de/gruppen/rede-brasil-da-tum/)*

Carlos Munoz

*... a native of Costa Rica who, thanks to a DAAD scholarship, came to TUM in 1977. He studied Mechanical Engineering, focusing on construction and development studies, and graduated with a diploma in 1980. Now, he lives in Brazil, where he and his wife settled and where he founded his own company in 1992. The company specializes in developing technical solutions in the fields of mechanics, electronics, and optics. For the TUM Network, Munoz serves as a contact person for Brazil.*



## A Fresh Take on Political Science

We would like to welcome all students and alumni of the Bavarian School of Public Policy to the TUM Network.

*Visit [www.together.tum.de](http://www.together.tum.de) to check out all the possible options!*

**According to the motto “A Fresh Take on Political Science”, the Bavarian School of Public Policy and the Technical University of Munich will be training the political scientists of tomorrow.**  
For more information, please see page 26 of this magazine.



# Dialogue means to enable exchange.

Using the TUM Community, it is easy to stay in contact with friends from your student days or to establish new contacts with people from all over the world. For example, why not get to know TUM Alumni Pablo Marañón Berrezueta, who is actively involved in the Alumni Network of South America.

[www.community.tum.de](http://www.community.tum.de)

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*From my point of view, TUM is characterized by thinking about and discussing topics together. I met a lot of different people, and some of the friendships still exist.”*

**Pablo Marañón Berrezueta,**  
agronomists and hotelier  
in the Amazon region

